

EXHIBIT 2

1 Complete list of parties and counsel listed on signature pages.

2 **UNITED STATES DISTRICT COURT**
3 **NORTHERN DISTRICT OF CALIFORNIA**
4 **SAN JOSE DIVISION**

5 VOIP-PAL.COM, INC., a Nevada corpora-
6 tion,

7 Plaintiff,

8 v.

9 APPLE INC., a California corporation,

10 Defendant.

Case No. 3:18-cv-06216-LHK

11
12 VOIP-PAL.COM, INC., a Nevada corpora-
13 tion,

14 Plaintiff,

15 v.

16 AMAZON.COM, INC., a Delaware corpora-
17 tion; AMAZON TECHNOLOGIES, INC., a
Nevada corporation,

18 Defendants.

Case No. 3:18-cv-07020-LHK_

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21 **JOINT INVALIDITY CONTENTIONS OF APPLE INC., AMAZON.COM, INC.,**
22 **AND AMAZON TECHNOLOGIES, INC.**
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Pursuant to the Court’s Case Management Order of January 16, 2019, defendants Apple Inc., Amazon.com, Inc., and Amazon Technologies, Inc. (collectively, “Defendants”) hereby jointly submit the following Initial Invalidity Contentions regarding U.S. Patent Nos. 9,537,762 (“the ’762 patent”), 9,813,330 (“the ’330 patent”), 9,826,002 (“the ’002 patent”), the 9,948,549 (“the ’549 patent”) (collectively, “the Asserted Patents”).

Plaintiff VoIP-Pal.com, Inc. (“VoIP-Pal”) alleges in its Initial Infringement Contentions that Defendants infringe claims 6, 16, 21, 26, and 30 of the ’762 patent, claims 3, 4, 12, and 14 of the ’330 patent, claims 1, 12, 22, 26, and 29 of the ’002 patent, and claims 2, 6, 9, 12, 17, and 24 of the ’549 patent (collectively, the “Asserted Claims”). As discussed below, Defendants contend that each of the Asserted Claims is invalid under at least 35 U.S.C. §§ 101, 102, 103, and/or 112.

1. Preliminary Statement And Reservation Of Rights

Defendants’ Initial Invalidity Contentions reflect Defendants’ present knowledge and contentions regarding the Asserted Claims. Thus, the following contentions are based on Defendants’ current knowledge, understanding, and belief as to the facts and information available as of the date of these Invalidity Contentions. Discovery has not yet been completed in this matter. Thus, Defendants have not yet completed their investigation, discovery, or analysis of matters relating to the invalidity of the Asserted Claims, including without limitation invalidity due to on-sale or public use statutory bars. In addition, Defendants’ search for prior art is ongoing. Accordingly, Defendants reserve the right to amend, modify, and supplement, without prejudice, these Invalidity Contentions as additional information is discovered or otherwise identified or appreciated, including testimony about the scope and content of the claimed inventions or state of the prior art.

Defendants submit these Initial Invalidity Contentions without waiving Defendants’ position that VoIP-Pal’s Infringement Contentions do not adequately identify with sufficient specificity the basis for VoIP-Pal’s contention that any accused product meets the limitations of any of the Asserted Claims. Nothing stated herein is or shall be treated as an admission or suggestion

1 that Defendants agree with VoIP-Pal regarding either the scope of any of the Asserted Claims or
2 the claim constructions advanced directly or implicitly by VoIP-Pal's Infringement Contentions
3 or in any other pleading, discovery request or response, or written or verbal communications with
4 Defendants. Additionally, nothing in these Initial Invalidity Contentions shall be treated as an
5 admission that any of Defendants' accused products meet any limitation of the Asserted Claims.
6 The disclosures herein are not and should not be construed as a statement that no other persons
7 have discoverable information, that no other documents, data compilations, or tangible things
8 exist that Defendants may use to support their claims or defenses, or that no other legal theories
9 or factual bases will be pursued.

10 In the absence of a claim construction order from the Court, Defendants have based these
11 Initial Invalidity Contentions upon Defendants' knowledge and understanding of the potential
12 scope of the Asserted Claims at this time, and, in part, upon the apparent constructions of the
13 Asserted Claims advanced by VoIP-Pal in its Infringement Contentions. Furthermore, VoIP-
14 Pal's Infringement Contentions contradict the teaching of the Asserted Patents, contradict the
15 understanding of the claim terms by a person of ordinary skill, and are vague and conclusory
16 concerning how certain claim limitations supposedly read on the accused products or activities.
17 Thus, Defendants are unable to discern VoIP-Pal's position regarding the construction of numer-
18 ous claim limitations and have provided these Initial Invalidity Contentions based in part on its
19 present understanding of VoIP-Pal's apparent constructions. Finally, Defendants' Initial Inva-
20 lidity Contentions do not necessarily represent Defendants' agreement or view as to the meaning
21 of any claim term contained therein, and Defendants may disagree with VoIP-Pal's interpretation
22 of the meaning of many terms and phrases in the Asserted Claims. In addition, Defendants'
23 Initial Invalidity Contentions do not necessarily represent Defendants' agreement or view as to
24 whether any claim preamble is a limitation of the claim.

25 Defendants' Initial Invalidity Contentions should not be interpreted to rely upon, or in
26 any way affect, the non-infringement arguments Defendants intend to assert in this case. De-
27 fendants also anticipate that the Court's construction of claim terms may significantly affect the
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1 scope of the Asserted Claims. Therefore, Defendants reserve the right to supplement, without
2 prejudice, these Initial Invalidity Contentions as appropriate depending upon the Court's con-
3 struction of the Asserted Claims, any findings as to the priority date of the Asserted Patents, and
4 positions that VoIP-Pal or its expert witnesses may take concerning claim interpretation, infringe-
5 ment, or invalidity issues.

6 Defendants provide certain claim charts as described herein. The claim charts reflect the
7 theories of invalidity described in each chart, including anticipation and obviousness. The sug-
8 gested obviousness combinations are in the alternative to Defendants' anticipation contentions.
9 The disclosed obvious combinations are not meant to be exhaustive and should not be construed
10 to suggest that any reference is not anticipatory in its own right. As reflected in the attached
11 exhibits, the discussion herein, and in the references themselves, all elements of VoIP-Pal's As-
12 serted Claims, arranged as claimed in the Asserted Claims, were disclosed in the art before the
13 Asserted Patents' earliest possible priority date, and one of ordinary skill in the art would have
14 readily fit their teachings together. Each of the references cited herein or in the attached exhibits
15 may be combined and modified in a number of obvious ways to achieve the claimed apparatus
16 and systems, including those disclosed in the attached exhibits.

17 Defendants further contend that various asserted claims of the Asserted Patents are inva-
18 lid for failure to satisfy the enablement, written description, or definiteness requirements of 35
19 U.S.C. § 112. Defendants' contentions are based in whole or in part on its present understanding
20 of the Asserted Claims and VoIP-Pal's apparent construction of those claims in its Infringement
21 Contentions. Accordingly, Defendants' invalidity contentions based upon 35 U.S.C. § 112 may
22 reflect alternative positions as to claim construction and scope. Further, by asserting grounds for
23 invalidity based on VoIP-Pal's apparent claim construction or any other particular claim con-
24 struction, Defendants are not adopting VoIP-Pal's claim construction, nor admitting to the accu-
25 racy of any particular claim construction.

26 **2. Priority Of The Asserted Patents**

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1 In its Infringement Contentions, Plaintiff contends that the Asserted Patents are entitled
 2 at least to the priority date of U.S. provisional application No. 60/856,212, filed on November 2,
 3 2006. Plaintiff further claims a conception date for the inventions claimed in the Asserted Patents
 4 by January 31, 2005 and a reduction to practice date by June 6, 2005.

5 Plaintiff is not entitled to a priority date earlier than the first non-provisional application
 6 PCT/CA2007/001956 on November 1, 2007 (and even that application fails to provide adequate
 7 support for the full scope of the asserted claims). First, a “patent is only entitled to claim the
 8 benefit of the filing date of its provisional application if the disclosure of the provisional appli-
 9 cation provides support for the claims . . . in compliance with § 112, ¶ 1.” *Dynamic Drinkware*
 10 *v. Nat’l Graphics Inc.*, 800 F.3d 1375, 1381 (Fed. Cir. 2015). The provisional application iden-
 11 tified by Plaintiff does not meet this requirement for either of the Asserted Patents and therefore
 12 Plaintiff cannot claim priority to the provisional application’s filing date.

13 Further, Plaintiff’s general contention that it “intends to demonstrate a conception date
 14 for the inventions claimed in the Patents-in-Suit by January 31, 2005 and a reduction to practice
 15 date for the inventions claimed in the Patents-in-Suit by June 6, 2005” fails to sufficiently dis-
 16 close any basis for an earlier priority date for the Asserted Patents.

17 **3. Invalidity Of The Asserted Claims Under 35 U.S.C. §§ 102 And 103**

18 Defendants contend that each Asserted Claim is invalid at least under 35 U.S.C. § 102,
 19 including subsections 102(a), 102(b), 102(e), and 102(g), and/or under 35 U.S.C. § 103 as set
 20 forth in the attached Exhibits C-1–F-35.¹ Pursuant to the Court’s Case Management Order, De-
 21 fendants identify herein prior art patents, publications, disclosures, products/devices/systems,
 22 and uses that anticipate or render obvious the Asserted Claims under 35 U.S.C. §§ 102 or 103.
 23 Defendants reserve the right to rely on other references disclosed or incorporated by reference in
 24 these Initial Invalidity Contentions, in the prior art identified below, in the Asserted Patents, or
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26 ¹ Exhibits with numbers starting with “C” correspond to invalidity charts for the ’762 patent;
 27 exhibits with numbers starting with “D” correspond to invalidity charts for the ’330 patent; ex-
 28 hibits with numbers starting with “E” correspond to invalidity charts for the ’002 patent; exhibits
 with numbers starting with “F” correspond to invalidity charts for the ’549 patent.

1 any related patents, in the file history of the Asserted Patents or any related patents, and in the
2 attached exhibits.

3 Defendants' detailed contentions as to how each identified prior art reference either an-
4 ticipates or renders obvious in claim chart form are attached as C-1–F-35. Defendants' claim
5 charts may disclose multiple theories of invalidity in a single chart. Each chart directed to an
6 anticipatory product/system also discloses how the product/system alone in light of the
7 knowledge and skill in the art, or in light of other references, renders each asserted claim obvious.
8 Additionally, each chart directed to an anticipatory patent or non-patent publication also discloses
9 how that reference in combination with one or more other references renders each Asserted Claim
10 obvious.

11 Pursuant to the Court's Case Management Order and the Local Patent Rules, Defendants
12 attach charts identifying exemplary prior art that anticipates or renders obvious each of the As-
13 serted Claims, as set forth in Exhibits C-1–F-35. For each Asserted Claim that is anticipated or
14 rendered obvious by an exemplary reference or combination, the corresponding claim chart in-
15 cludes a citation to that reference or combination for each limitation. Where Defendants cite to
16 a particular figure in a prior art reference, the citation should be understood to encompass the
17 caption and description of the figure as well as any text relating to the figure in addition to the
18 figure itself. Conversely, where a cited portion of text refers to a figure, the citation should be
19 understood to include the figure as well. Furthermore, while Defendants have identified at least
20 one citation per limitation present in a reference or combination, each and every disclosure of the
21 same or similar limitation in the same reference or combination is not necessarily identified. In
22 an effort to focus the issues, Defendants cite only particularly pertinent portions of identified
23 references, even where a reference or combination may contain additional support for a particular
24 claim element. Thus, Defendants may rely on uncited portions of the prior art references for
25 additional support for a particular element. Defendants may rely upon other prior art identified
26 in future supplements, corroborating references, documentation, source code, products, and tes-
27 timony, including materials obtained through further investigation and third-party discovery of
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1 the prior art identified herein, that demonstrates the invalidating functionality identified in these
2 Initial Invalidity Contentions or that show the state of the art in the relevant time period (irre-
3 spective of whether such references themselves qualify as prior art to the Asserted Patent), and
4 expert testimony to provide context to or aid in understanding the cited portions of the identified
5 prior art. Similarly, where there are multiple references relating to a single prior art product or
6 system, Defendants may cite only to a single reference for a particular limitation, even though
7 other references may also contain similar teachings. Thus, Defendants may rely on uncited ref-
8 erences relating to a particular prior art document or system for additional support for a particular
9 element. Any prior art disclosed as anticipating a limitation also renders that limitation obvious.

10 Additionally, persons of ordinary skill in the art generally read a prior art reference as a
11 whole and in the context of other publications and literature. Numerous prior art references,
12 including those identified herein and in the attached exhibits, reflect common knowledge and the
13 state, scope, and content of the prior art before the priority date of the Asserted Claims of the
14 Asserted Patents. Defendants may rely on uncited portions of the prior art references and on
15 other publications and expert testimony to provide context and as aids to understanding and in-
16 terpreting the portions that are cited.

17 In general, a claimed invention is invalid due to obviousness “if the differences between
18 the claimed invention and the prior art are such that the claimed invention as a whole would have
19 been obvious before the effective filing date of the claimed invention to a person having ordinary
20 skill in the art.” 35 U.S.C. § 103; *Graham v. John Deere Co.*, 383 U.S. 1, 13-14 (1966). The
21 ultimate determination of whether an invention is or is not obvious is a legal conclusion based
22 on underlying factual inquiries including: “(1) the scope and content of the prior art; (2) the dif-
23 ferences between the prior art and the claims; (3) the level of ordinary skill in the art at the time
24 of invention; and (4) objective evidence of nonobviousness.” *Miles Labs., Inc. v. Shandon, Inc.*,
25 997 F.2d 870, 877 (Fed. Cir. 1993); *see Graham*, 383 U.S. at 17-18. The U.S. Supreme Court
26 decision in *KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1739 (2007) reaffirmed *Graham*, but
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1 further held that a claimed invention can be obvious even if there is no explicit teaching, sugges-
2 tion, or motivation for combining the prior art to produce that invention.

3 To the extent that any claim limitation is not anticipated pursuant to 35 U.S.C. § 102,
4 Defendants contend that any purported differences are such that the claimed subject matter as a
5 whole would have been obvious to one skilled in the art at the time of the alleged invention, in
6 view of the state of the art and knowledge of those skilled in the art under 35 U.S.C. § 103. Each
7 Asserted Claim would have been obvious in view of each reference cited in Exhibits C-1–F-35
8 either alone or combined with the knowledge that was possessed by one of ordinary skill in the
9 art. Additionally, each Asserted Claim would have been obvious to one of ordinary skill in the
10 art in view of the combination of any one of the prior art references identified in Exhibits C-1–
11 F-35 with one or more of the other references identified in the tables below.

12 In particular, those of ordinary skill in the art at the time of the alleged invention of the
13 Asserted Patents would have been motivated to modify or combine the prior art references set
14 forth herein because, inter alia: (a) the references in general deal with the same or related subject
15 matter; (b) one of ordinary skill in the art would have been motivated by the problem that the
16 inventor was attempting to solve, or with other problems that would have been faced in reaching
17 a solution, and would have looked to references that concerned similar issues or taught how to
18 overcome the problems faced; (c) the combinations were obvious to try and would have operated
19 in their known and expected way; (d) the combinations were within the technical skill and un-
20 derstanding of a person of ordinary skill in the art; (e) the combinations would have been moti-
21 vated by the developments in technology; and (f) the combinations reflect various design choices
22 that would have been known to one of ordinary skill in the art and within that person’s technical
23 capability to implement (i.e., technically feasible).

24 The various motivations described above provide a basis for combining or modifying
25 references, as detailed below, to render each of the Asserted Claims obvious. In addition, the
26 Court can consider the inferences and creative steps a person of ordinary skill in the art would
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employ in making such combinations. *See KSR*, 127 S. Ct. at 1741 (“a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ”).

Defendants have identified a non-exhaustive list of one or more potential combinations that would render each of the Asserted Claims of the Asserted Patents obvious in the claim charts identified by exhibit number in the table below. Specifically, Defendants contend that the following references anticipate or render obvious (alone, or in combination with other references as set forth in detail in each claim chart) the Asserted Claims:

a. Systems

| Exhibit No. | Name of System | Publicly known, in use, on sale, or sold in the U.S. at least by | Exemplary Publications Describing the System | Publication Date | Production Number |
|--------------------|----------------|--|---|------------------|--------------------|
| C-1, D-1, E-1, F-1 | Vonage | 9/22/2003 | Vonage Holdings Corporation Petition for Declaratory Ruling Concerning an Order of the Minnesota Public Utilities Commission, WC 03-211 (“Vonage FCC Petition”) | Filed 9/22/2003 | DEFCON-MON00056739 |
| | | | Letter from William B. Wilhelm, Jr., Counsel for Vonage, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 03-211 (“Vonage | Filed 10/1/2004 | DEFCON-MON00056881 |

| Exhibit No. | Name of System | Publicly known, in use, on sale, or sold in the U.S. at least by | Exemplary Publications Describing the System | Publication Date | Production Number |
|-------------|----------------|--|--|---------------------|---------------------------|
| | | | FCC Wilhelm Letter") | | |
| | | | FCC In the Matter of Vonage Holdings Corporation WC Docket No. 03-211, ("Vonage FCC Order") | Released 11/12/2004 | DEFCOM-MON00056698 |
| | | | <i>Digifonica Partner Program Guide</i> , ("Digifonica Comparison") | Spring 2005 | VPLM00006360-VPLM00006397 |
| | | | Vonage Holdings Corporation 2006 10-K form. Retrieved from https://ir.vonage.com/financials/annual-reports ("Vonage 10-K Form 2006") | 2007 | DEFCOM-MON00056556 |
| | | | <i>Vonage 311</i> , Vonage, http://www.vonage.com/no_flash/features.php?feature=311 ("Vonage Website 311") | 11/6/2004 | DEFCOM-MON00057084 |

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|-------------|----------------|--|---|---|--------------------|
| | | | <i>7-Digit Dialing</i> , Vonage, http://www.vonage.com/no_flash/features.php?feature=7_digit_dialing (“Vonage Website 7-Digit Dialing”) | 11/6/2004 | DEFCON-MON00057083 |
| | | | <i>Free Calling</i> , Vonage, http://www.vonage.com/no_flash/features.php?feature=subscriber_to_subscriber (“Vonage Website Free Calling”) | 11/6/2004 | DEFCON-MON00057088 |
| | | | U.S. Patent No. 7,453,990, (“Welenson ’990”). | Filed 6/22/2004; published 8/11/2005; issued 11/18/2008 | DEFCON-MON00056544 |
| | | | <i>3-Way Calling</i> , Vonage, http://www.vonage.com/no_flash/features.php?feature=3_way_calling | November 6, 2004 | DEFCON-MON00057082 |

| Exhibit No. | Name of System | Publicly known, in use, on sale, or sold in the U.S. at least by | Exemplary Publications Describing the System | Publication Date | Production Number |
|--------------------|----------------|--|--|------------------|--------------------|
| C-2, D-2, E-2, F-2 | Avaya | 6/2005 | <i>Understanding VoIP: Leveraging Technology for a Competitive Edge</i> , Avaya (“Avaya VoIP White Paper”) | 10/2005 | DEFCON-MON00036658 |
| | | | <i>Feature Description and Implementation for Avaya Communication Manager</i> (“Avaya Feature Description”) | 6/2005 | DEFCON-MON00036689 |
| | | | <i>Administrator Guide for Avaya Communication Manager</i> , Issue 1 (“Avaya Administrator Guide”) | 6/2005 | DEFCON-MON00038133 |
| | | | <i>Configuring H.323 Signaling and IP Trunks between Avaya Communication Manager and Cisco CallManager 4.0</i> , Issue 1.0 (“Avaya Cisco | 4/8/2005 | DEFCON-MON00039820 |

| Exhibit No. | Name of System | Publicly known, in use, on sale, or sold in the U.S. at least by | Exemplary Publications Describing the System | Publication Date | Production Number |
|---------------------------|----------------|--|---|------------------|---------------------------------------|
| | | | Configura- tion") | | |
| | | | <i>Configuring Avaya Commu- nication Man- ager with a Multi Location Dial Plan</i> , Is- sue 1.0 ("Avaya Multi Location Dial Plan Notes") | 3/18/2004 | DEFCON- MON000397 89 |
| | | | <i>Application Notes for H.323 Voice over IP Trunk- ing between Avaya Commu- nication Man- ager and VoIP Americas Na- tivevoip VoIP Service</i> , Issue 1.0 ("Avaya NativeVoIP Gateway Con- figuration"). | 6/16/2005 | DEFCON- MON000398 07 |
| C-3, D- 3, E-3, F-3 | Skype | 1/18/2005 | <i>Digifonica Partner Pro- gram Guide</i> , ("Digifonica Comparison") | Spring 2005 | VPLM00006 360- VPLM00006 397 |
| | | | <i>Skype - Free Internet teleph- ony that just works</i> , Skype, | 1/30/2005 | DEFCON- MON000560 45; DEF- |

| Exhibit No. | Name of System | Publicly known, in use, on sale, or sold in the U.S. at least by | Exemplary Publications Describing the System | Publication Date | Production Number |
|-------------|----------------|--|---|------------------|--------------------|
| | | | http://www.skype.com/ ("Skype Website Introduction") | | COM-MON00056048 |
| | | | <i>How to Use SkypeOut</i> , Skype, http://www.skype.com/help/guides/skypeout.html ("How to Use SkypeOut") | 1/27/2005 | DEFCON-MON00056043 |
| | | | <i>About SkypeOut</i> , Skype, http://skype.com/products/skypeout/ ("About SkypeOut") | 1/27/2005 | DEFCON-MON00055992 |
| | | | <i>How to Use Skype</i> , Skype, http://www.skype.com/help/guides/using-skype.html ("How to Use Skype") | 1/27/2005 | DEFCON-MON00056038 |
| | | | <i>How to Remove a Contact</i> , Skype, http://www.skype.com/help/gu | 1/25/2005 | DEFCON-MON00056037 |

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|-------------|----------------|--|---|------------------|--------------------|
| | | | ides/re-move.html (“Skype Website Speed-Dial”) | | |
| | | | Salman A. Baset and Henning Schulzrinne, <i>An Analysis of the Skype Peer-to-Peer Internet Telephony Protocol</i> , (“Baset Article”). | 9/15/2004 | DEFCON-MON00055869 |
| | | | Dennis Bergström, <i>An analysis of Skype VoIP application for use in a corporate environment</i> (“Bergström Article”) | 10/2004 | DEFCON-MON00055891 |
| | | | <i>How to Call – Skype User Guide</i> , Skype, http://www.skype.com:80/help/guides/call.html (“Skype Website Speed-Dial”) | 10/26/2005 | DEFCON-MON00056097 |
| | | | <i>Download Skype for Windows</i> , Skype, | 1/19/2005 | DEFCON-MON00056036 |

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|--------------------|----------------|--|---|------------------|---|
| | | | http://www.skype.com/products/skype/windows/ | | |
| C-4, D-4, E-4, F-4 | Skype 1.4 | 10/24/2005 | <i>Skype - Free Internet telephony that just works</i> , Skype, http://www.skype.com/ (“Skype Website Introduction”) | 10/30/2005 | DEF- COM- MON00056142; DEF- COM- MON00056145; DEF- COM- MON00056148 |
| | | | <i>How to Use SkypeOut</i> , Skype, http://www.skype.com/help/guides/skypeout.html (“How to Use SkypeOut”) | 10/26/2005 | DEF- COM- MON00056103 |
| | | | <i>How to Use Skype</i> , Skype, http://www.skype.com/help/guides/using-skype.html (“How to Use Skype”) | 10/27/2005 | DEF- COM- MON00056098 |
| | | | <i>How to Call – Skype User Guide</i> , Skype, http://www.skype.com:80/help/guides/call.ht | 10/26/2005 | DEF- COM- MON00056097 |

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|-------------|----------------|--|--|------------------|--------------------|
| | | | ml (“Skype Website Speed-Dial”) | | |
| | | | Salman A. Baset and Henning Schulzrinne, <i>An Analysis of the Skype Peer-to-Peer Internet Telephony Protocol</i> , (“Baset Article”). | 9/15/2004 | DEFCON-MON00055869 |
| | | | Dennis Bergström, <i>An analysis of Skype VoIP application for use in a corporate environment</i> (“Bergström Article”) | 10/2004 | DEFCON-MON00055891 |
| | | | Taavet Hinrikus, <i>Skype API</i> , Version 1.2 (“Skype API”). | 3/4/2005 | DEFCON-MON00055823 |
| | | | Hao Wang, <i>Skype VoIP service-architecture and comparison</i> (“Wang Article”). | 6/22/2005 | DEFCON-MON00055881 |

| Exhibit No. | Name of System | Publicly known, in use, on sale, or sold in the U.S. at least by | Exemplary Publications Describing the System | Publication Date | Production Number |
|--------------------|----------------|--|--|------------------|---------------------------|
| | | | <i>Digifonica Partner Program Guide</i> , (“Digifonica Comparison”) | Spring 2005 | VPLM00006360-VPLM00006397 |
| | | | <i>Download Skype for Windows</i> , Skype, http://www.skype.com/products/skype/windows/ | 10/26/2005 | DEFCON-MON00056096 |
| C-5, D-5, E-5, F-5 | Tenor | 2001 | <i>Tenor Call Routing Server Product Guide</i> , Quintum Technologies, Inc. | 2003 | DEFCON-MON00056164 |
| | | | <i>Tenor Call Routing</i> , Quintum Technologies, Inc. | 2005 | DEFCON-MON00056270 |
| | | | <i>Tenor Call Routing</i> , Quintum Technologies, Inc. | 2001 | DEFCON-MON00056297 |
| C-6, D-6, E-6, F-6 | Asterisk | 3/30/2003 | Mark Spencer et. al, <i>The Asterisk Handbook</i> , Version 2 | 3/30/2003 | DEFCON-MON00051219 |
| | | | Jim Van Meggelen et. al, <i>Asterisk The</i> | 8/31/2005 | DEFCON-MON00051306 |

| Exhibit No. | Name of System | Publicly known, in use, on sale, or sold in the U.S. at least by | Exemplary Publications Describing the System | Publication Date | Production Number |
|--------------------|--------------------|--|--|--------------------|-------------------------|
| | | | <i>Future of Technology</i> | | |
| | | | Paul Mahler, <i>VoIP Telephony with Asterisk</i> | 10/20/2005 | DEFCON-MON00052360 |
| | | | David Gomillion et. Al, <i>Building Telephony Systems with Asterisk</i> | 9/2005 | DEFCON-MON00051682 |
| C-7, D-7, E-7, F-7 | Cisco Call Manager | 2001 | <i>System Description for the Cisco Communications Network</i> | January 1999 | DEFCON-MON00050756 |
| | | | David Bateman, <i>Configuring Call Manager and Unity: A Step-by-Step Guide</i> | June 2005 | DEFCON-MON00049303 |
| | | | <i>Cisco IP Telephony Network Design Guide</i> | December 2000 | DEFCON-MON00008286 |
| | | | Dave Corley, <i>Distributed Enterprise Call Processing/Call Control Server</i> | September 13, 2000 | Cisco-VoIP Pal000000432 |

| Exhibit No. | Name of System | Publicly known, in use, on sale, or sold in the U.S. at least by | Exemplary Publications Describing the System | Publication Date | Production Number |
|-------------|----------------|--|--|--------------------|------------------------|
| | | | <i>(Cisco Call-Manager version 3.1 product requirements document)</i> | | |
| | | | <i>Cisco Call-Manager Service Enterprise Parameters for Parche Interface Specification</i> | September 19, 2003 | Cisco-VoIP Pal00000475 |
| | | | <i>Chu-shen Liu & Jessie Chang, Cisco Call-Manager/IOS Gateway System Test Plan—Centralized Call Processing Deployment Model</i> | September 2, 2000 | Cisco-VoIP Pal00000503 |
| | | | <i>John Restrict, CallManager Architecture Overview, January 21, 2007</i> | January 21, 2007 | Cisc-VoIP Pal00000594 |
| | | | <i>Marc Ayres et al., Seadragon – GA Product Requirements Document</i> | May 2004 | Cisco-VoIP Pal00000683 |

| Exhibit No. | Name of System | Publicly known, in use, on sale, or sold in the U.S. at least by | Exemplary Publications Describing the System | Publication Date | Production Number |
|-------------------------------------|------------------|--|--|------------------|------------------------|
| | | | Chris Pearce et al., <i>Cisco Call-Manager Fundamentals</i> , 1st edition | July 2001 | Cisco-VoIP Pal00000807 |
| | | | Chris Pearce et al., <i>Cisco Call-Manager Fundamentals</i> , 2d edition | September 2005 | Cisco-VoIP Pal00000808 |
| | | | Salvator Col-lora et al., <i>CallManager Best Practices</i> , | June 2004 | Cisco-VoIP Pal00000809 |
| Inten- tionally left blank | Broad- Works | January 2001 | <p>Defendants are currently in the process of receiving permission to use the confidential information contained in these exhibits.</p> <p>Defendants will share these exhibits as soon as permission is granted.</p> <p>Defendants reserve the right to rely on the corresponding charts served in <i>VoIP-Pal.com, Inc. v. Twitter, Inc., et al.</i>, No. 18-cv-04523-LHK (Exs. A-8, B-8).</p> | | |
| Inten- tionally left blank | Call- Vantage | 2004 | <p>Defendants are currently in the process of receiving permission to use the confidential information contained in these exhibits.</p> <p>Defendants will share these exhibits as soon as permission is granted.</p> <p>Defendants reserve the right to rely on the corresponding charts served in <i>VoIP-Pal.com, Inc. v.</i></p> | | |

| Exhibit No. | Name of System | Publicly known, in use, on sale, or sold in the U.S. at least by | Exemplary Publications Describing the System | Publication Date | Production Number |
|--------------------------|-----------------------------|--|--|------------------|-------------------|
| | | | <i>Twitter, Inc., et al.</i> , No. 18-cv-04523-LHK (Exs. A-12, B-12). | | |
| Intentionally left blank | Sylantro | 2006 | <p>Defendants are currently in the process of receiving permission to use the confidential information contained in these exhibits.</p> <p>Defendants will share these exhibits as soon as permission is granted.</p> <p>Defendants reserve the right to rely on the corresponding charts served in <i>VoIP-Pal.com, Inc. v. Twitter, Inc., et al.</i>, No. 18-cv-04523-LHK (Exs. A-9, B-9).</p> | | |
| Intentionally left blank | Altigen Communications Inc. | 3/1999 | This system is the subject of ongoing investigation and/or discovery of third-party information. Publications and other documents related to this system will be produced in due course as investigation and/or discovery proceeds. | | |
| | | | <i>Data Communications: The Global Maga-</i> | 3/1999 | DEFMON00057097 |

| Exhibit No. | Name of System | Publicly known, in use, on sale, or sold in the U.S. at least by | Exemplary Publications Describing the System | Publication Date | Production Number |
|--------------------------|-------------------------------|--|---|------------------|--------------------|
| | | | <i>zine for Network Architects</i> , March 1999. | | |
| Intentionally left blank | StarVox, Inc. | 1/25/2001 | This system is the subject of ongoing investigation and/or discovery of third-party information. Publications and other documents related to this system will be produced in due course as investigation and/or discovery proceeds. | | |
| | | | WO2001006740 ("Duffy"). | 1/25/2001 | DEFCON-MON00021112 |
| Intentionally left blank | Popstar Global Communications | 4/3/2003 | This system is the subject of ongoing investigation and/or discovery of third-party information. Publications and other documents related to this system | | |

| Exhibit No. | Name of System | Publicly known, in use, on sale, or sold in the U.S. at least by | Exemplary Publications Describing the System | Publication Date | Production Number |
|--------------------|-------------------------|--|--|------------------------------|--------------------|
| | | | will be produced in due course as investigation and/or discovery proceeds. | | |
| | | | WO2003028355 (“Brongo”) | 4/3/2003 | DEFCON-MON00021232 |
| C-8, D-8, E-8, F-8 | Digifonica ² | June 2005 | IPR2016-01201, Ex. 2016 Decl. of Mangione-Smith | Declaration Signed 2/10/2017 | DEFCON-MON00034658 |
| | | | IPR2016-01201, Ex. 2014 RBR Source Code Version 361 | 6/6/2005 | DEFCON-MON00034557 |
| | | | IPR2016-01201, Ex. 2003 Technical Review of Digifonica VoIP System | 5/7/2005 | DEFCON-MON00034480 |

² VoIP-Pal has stated in responses to discovery requests that it intends to prove a date of conception of January 31, 2005, and a reduction to practice by June 6, 2005. VoIP-Pal has asserted that Digifonica reduced to practice the claimed functionality by June 2005. *See* IPR2016-01198, Ex. 2016, Decl. of Mangione-Smith, ¶¶ 25-29, Decl. of IPR2016-01201, Ex. 2016, Decl. of Mangione-Smith, ¶¶ 25-29. On information and belief, this system was on sale or in public use in the United States before November 2, 2005. Defendants’ investigation into this system is ongoing and Defendants expressly reserve the right to supplement their contentions as Defendants’ investigation progresses.

| Exhibit No. | Name of System | Publicly known, in use, on sale, or sold in the U.S. at least by | Exemplary Publications Describing the System | Publication Date | Production Number |
|-------------|----------------|--|--|------------------------------|--------------------|
| | | | IPR2016-01201, Ex.2020 Next Generation Networks – A Migration Path Digifonica Voice Over IP Technologies | 6/3/2005 | DEFCON-MON00034757 |
| | | | IPR2016-01201, Ex.2018 Decl. of Terry | Declaration Signed 2/8/17 | DEFCON-MON00034744 |
| | | | IPR2016-01201, Ex.2013 Decl. of Perreault | Declaration Signed 2/8/2017 | DEFCON-MON00034551 |
| | | | IPR2016-01201, Ex.2012 Decl. of Bjorsell | Declaration Signed 2/9/2017 | DEFCON-MON00034542 |
| | | | IPR2016-01198, Ex. 2016 Decl. of Mangione-Smith | Declaration Signed 2/10/2017 | DEFCON-MON00030381 |
| | | | IPR2016-01198, Ex. 2014 RBR Source Code Version 361 | 6/6/2005 | DEFCON-MON00030280 |
| | | | IPR2016-01198, Ex. 2003 Technical | 5/7/2005 | DEFCON-MON00030203 |

| Exhibit No. | Name of System | Publicly known, in use, on sale, or sold in the U.S. at least by | Exemplary Publications Describing the System | Publication Date | Production Number |
|--------------------|--------------------------|--|--|-----------------------------|--------------------|
| | | | Review of Digifonica VoIP System | | |
| | | | IPR2016-01198, Ex.2020 Next Generation Networks – A Migration Path Digifonica Voice Over IP Technologies | 6/3/2005 | DEFCON-MON00030494 |
| | | | IPR2016-01198, Ex.2018 Decl. of Terry | Declaration Signed 2/8/17 | DEFCON-MON00030481 |
| | | | IPR2016-01198, Ex.2013 Decl. of Perreault | Declaration Signed 2/8/2017 | DEFCON-MON00030274 |
| | | | IPR2016-01198, Ex.2012 Decl. of Bjorsell | Declaration Signed 2/9/2017 | DEFCON-MON00030265 |
| C-9, D-9, E-9, F-9 | MCI Systems ³ | November 21, 2002 | IP Communications Overview Presentation, MCI Net- | 2002 | DEFCON-MON00053522 |

³ On information and belief, MCI and Verizon created a system known as IP Communications, Worldcom Connection, and MCI Advantage that implemented the claimed functionality. See DEFCON00053347-3883. Defendants' investigation into this system is ongoing and Defendants expressly reserve the right to supplement its contentions as Defendants' investigation progresses.

| Exhibit No. | Name of System | Publicly known, in use, on sale, or sold in the U.S. at least by | Exemplary Publications Describing the System | Publication Date | Production Number |
|-------------|----------------|--|--|------------------|--------------------|
| | | | work Development Engineering | | |
| | | | Call Flows for IP Communications Phase 4a, Greg Paterno, Worldcom Network Development Engineering | 8/29/2001 | DEFCON-MON00053374 |
| | | | WorldCom Gen-D SIP Server Overview for Home Depot Presentation, Diana Rawlins Emerging Network Solutions Development | 1/2002 | DEFCON-MON00053862 |
| | | | McMurry, Kathleen and Gregorat, Mariafranca, Redirect Server Invite Logic Requirements, Release 4.8.2 | 11/21/2002 | DEFCON-MON00053610 |
| | | | McMurry, Kathleen and Gregorat, Mariafranca, Redirect Server Invite | 7/1/2003 | DEFCON-MON00053643 |

| Exhibit No. | Name of System | Publicly known, in use, on sale, or sold in the U.S. at least by | Exemplary Publications Describing the System | Publication Date | Production Number |
|-------------|----------------|--|--|------------------|--------------------|
| | | | Logic Requirements, Release 5.0 (rev 20) | | |
| | | | Gregorat, Mariafranca, Redirect Server Invite Logic Requirements, Release 5.7 (rev 4) | 8/18/2005 | DEFCON-MON00053791 |
| | | | SIP Beyond VoIP – The Next Step in the IP Communications Revolution, Sinnreich, Henry <i>et al.</i> , VON Publishing, New York, New York | July 2005 | DEFCON-MON00053368 |
| | | | Email from Douglas Smith to Lance Lockhart et al., RS 5.0.1 FVO – Status Update | 7/17/2003 | DEFCON-MON00053347 |
| | | | Email from Douglas Smith to Lance Lockhart et al., RS 5.0.1 Rollout – Status Update | 7/18/2003 | DEFCON-MON00053367 |

| Exhibit No. | Name of System | Publicly known, in use, on sale, or sold in the U.S. at least by | Exemplary Publications Describing the System | Publication Date | Production Number |
|-------------|----------------|--|---|------------------|--------------------|
| | | | MCI Advantage FAQ, MCI, http://business.mci.com/small_business/local_long_distance/mci_advantage_faq.jsp , accessed through Internet Archive https://web.archive.org/web/20040605210459/http://business.mci.com/small_business/local_long_distance/mci_advantage_faq.jsp (“MCI Advantage FAQ”) | 6/5/2004 | DEFCON-MON00053362 |

b. Patents and Patent Applications

| Exhibit No. | Abbreviated Name | Patent or Publication No. | Country of Origin | Filing Date | Date of Issue or Publication | Production Number |
|------------------------|------------------|---------------------------|-------------------|-------------|------------------------------|--------------------|
| C-10, D-10, E-10, F-10 | Silverman | 5,875,240 | United States | 2/21/1997 | 2/23/1999 | DEF-COM-MON0014939 |

| Exhibit No. | Abbreviated Name | Patent or Publication No. | Country of Origin | Filing Date | Date of Issue or Publication | Production Number |
|---------------------------------|-------------------------|---------------------------|-------------------|-------------|------------------------------|---------------------|
| C-11, D-11, E-11, F-11 | Farah | 7,916,846 | United States | 8/31/2005 | 3/29/2011 | DEF-COM-MON00018877 |
| C-12, D-12, E-12, F-12 | Mermel | 7,016,343 | United States | 12/28/2001 | 3/21/2006 | DEF-COM-MON00017612 |
| C-13, D-13, E-13, F-13 | Smyk ⁴ | 6,597,686 | United States | 4/21/1998 | 7/22/2003 | DEF-COM-MON00015744 |
| C-14, D-14, E-14, F-14 | Fellingham ⁵ | 6,292,553 | United States | 5/20/1998 | 9/18/2001 | DEF-COM-MON00015244 |
| C-15, D-15, E-15, F-15 | Seligmann | WO 03/096559 | United States | 5/6/2003 | 11/20/2003 | DEF-COM-MON00021251 |
| C-16, D-16, E-16, F-16 | Fisher | 2004/0218748 | United States | 12/23/2003 | 11/4/2004 | DEF-COM-MON00014725 |
| C-17, D-17, E-17, F-17 | Mak | 2002/0116464 | United States | 3/27/2001 | 8/22/2002 | DEF-COM-MON00019352 |

⁴ On information and belief, Telcordia created a system implementing the functionality described in Smyk (U.S. Pat. No. 6,597,686). Defendants expressly reserve the right to rely on any potential Telcordia system art as an alternative and/or different reference from Smyk (U.S. Pat. No. 6,597,686).

⁵ On information and belief, AT&T Corp. ("AT&T") created a system implementing the functionality described in Fellingham (U.S. Pat. No. 6,292,553). *See* DEF-COMMON00015244. Defendants expressly reserve the right to rely on any potential AT&T system art as an alternative and/or different reference from Fellingham (U.S. Pat. No. 6,292,553).

| Exhibit No. | Abbreviated Name | Patent or Publication No. | Country of Origin | Filing Date | Date of Issue or Publication | Production Number |
|---------------------------------|------------------|---------------------------|-------------------|-------------|------------------------------|---------------------|
| C-18, D-18, E-18, F-18 | Alfke | 7,765,263 | United States | 12/19/2003 | 7/27/2010 | DEF-COM-MON00018753 |
| C-19, D-19, E-19, F-19 | Alfke '136 | 7,836,136 | United States | 7/31/2006 | 11/16/2010 | DEF-COM-MON00018840 |
| C-20, D-20, E-20, F-20 | Chu '684 | 7,486,684 | United States | 9/30/2003 | 2/3/2009 | DEF-COM-MON00018485 |
| C-21, D-21, E-21, F-21 | Veschi | 2001/0028642 | United States | 2/29/2001 | 11/11/2001 | DEF-COM-MON00019209 |
| C-22, D-22, E-22, F-22 | Nadeau | 6,240,449 | United States | 11/2/1998 | 5/29/2001 | DEF-COM-MON00015139 |
| C-23, D-23, E-23, F-23 | Duffy | WO2001006740 | United States | 7/14/2000 | 1/25/2001 | DEF-COM-MON00021112 |
| C-24, D-24, E-24, F-24 | Gregorat | 2007/0061397 | United States | 7/28/2006 | 3/15/2007 | DEF-COM-MON00020359 |
| C-25, D-25, E-25, F-25 | Pearce | 7,359,368 | United States | 5/25/2000 | 4/15/2008 | DEF-COM-MON00018361 |
| C-26, D-26, E-26, F-26 | Chinni | 6,205,135 | United States | 3/6/1997 | 3/20/2001 | DEF-COM-MON00015112 |

| Exhibit No. | Abbreviated Name | Patent or Publication No. | Country of Origin | Filing Date | Date of Issue or Publication | Production Number |
|---------------------------------|-----------------------|---------------------------|-------------------|-------------|------------------------------|---------------------|
| C-27, D-27, E-27, F-27 | Al Hakim ⁶ | 6,954,455 | United States | 4/2/2001 | 10/11/2005 | DEF-COM-MON00017556 |
| C-28, D-28, E-28, F-28 | Voit ⁷ | 6,870,827 | United States | 3/19/1997 | 3/22/2005 | DEF-COM-MON00018779 |
| C-29, D-29, E-29, F-29 | Cope | 7,616,753 | United States | 5/3/2004 | 11/10/2009 | DEF-COM-MON00018695 |
| C-30, D-30, E-30, F-30 | Elliott | 6,754,181 | United States | 11/18/1996 | 6/22/2004 | DEF-COM-MON00016512 |
| C-31, D-31, E-31, F-31 | Duffy II | WO200069156 | United States | 5/12/2000 | 11/16/2000 | DEF-COM-MON00021023 |
| C-32, D-32, E-32, F-32 | Pickett | 6,498,791 | United States | 5/4/2001 | 12/24/2002 | DEF-COM-MON00015433 |
| C-33, D-33, E-33, F-33 | Bales '974 | 4,661,974 | United States | 4/13/1984 | 4/28/1987 | DEF-COM-MON00014783 |

⁶ On information and belief, AT&T created a system implementing the functionality described in Al Hakim (U.S. Pat. No. 6,954,455). Defendants expressly reserve the right to rely on any potential AT&T system art as an alternative and/or different reference from Al Hakim (U.S. Pat. No. 6,954,455).

⁷ On information and belief, Verizon created a system implementing the functionality described in Voit (U.S. Pat. No. 6,870,827). Defendants expressly reserve the right to rely on any potential Verizon system art as an alternative and/or different reference from Voit (U.S. Pat. No. 6,870,827).

| Exhibit No. | Abbreviated Name | Patent or Publication No. | Country of Origin | Filing Date | Date of Issue or Publication | Production Number |
|--------------------------|------------------|----------------------------|-------------------|-------------|------------------------------|---------------------|
| Intentionally left blank | Koch '049 | 7,412,049 | United States | 5/31/2002 | 8/12/2008 | DEF-COM-MON00058225 |
| Intentionally left blank | Meubus | 6,185,565 | United States | 12/18/1997 | 2/6/2001 | DEF-COM-MON00015088 |
| Intentionally left blank | Choupak | 7,346,156 | United States | 1/27/2005 | 3/18/2008 | DEF-COM-MON00058212 |
| Intentionally left blank | Chang | U.S. Pub. No. 2003/0095541 | United States | 3/4/2002 | 5/22/2003 | DEF-COM-MON00019562 |
| Intentionally left blank | Scott | U.S. Pat. No. 6,760,324 | United States | 9/10/1999 | 7/6/2004 | DEF-COM-MON00017305 |
| Intentionally left blank | Hinchey | U.S. Pub. No. 2002/0122547 | United States | 12/21/2000 | 9/5/2002 | DEF-COM-MON00019375 |

c. Non-Patent Literature

| Exhibit No. | Title | Date of Publication | Author | Publisher | Publication Number |
|------------------------|--|---------------------|---------------------|----------------------|---------------------|
| C-34, D-34, E-34, F-34 | Session Initiation Protocol (RFC 3261) | 6/2002 | J. Rosenberg et. al | The Internet Society | DEF-COM-MON00010431 |
| C-7, D-7, E-7, F-7 | Cisco Call-Manager Fundamentals | 2002 | Alexander et al. | Cisco Press | DEF-COM-MON00057483 |

| Exhibit No. | Title | Date of Publication | Author | Publisher | Publication Number |
|--------------------------|----------------------------|---------------------|----------------------------|----------------------------|--------------------|
| Intentionally left blank | Voice Over IP Fundamentals | 2000 | Jonathan Davidson et al. | Cisco Press | DEFCON-MON00050798 |
| C-5, D-5, E-5, F-5 | Tenor Call Routing | 6/10/2005 | Quintum Technologies, Inc. | Quintum Technologies, Inc. | DEFCON-MON00056270 |

If, and to the extent, VoIP-Pal challenges the correspondence of any of these references with respect to particular limitations of the Asserted Claims of the Asserted Patents, Defendants reserve the right to supplement these invalidity contentions to identify additional combinations, motivations to modify, or explanations for particular references with additional particularity.

Additionally, Defendants believe that certain non-parties and current or former employees thereof may have possession of relevant information and/or documents constituting prior art to the Asserted Patents. Defendants are continuing its investigation into these and other companies and their products. Defendants reserve the right to supplement these Initial Invalidity Contentions to identify additional references, combinations, motivations to modify, or explanations for particular references based on any information and/or documents provided by the former employees and/or successors-in-interests of companies or individuals who may possess relevant information and/or documents constituting prior art to the Asserted Patents.

4. Invalidity Of The Asserted Patents Based On 35 U.S.C. § 112 For Lack Of Written Description And Enablement

The specification of the Asserted Patents does not provide adequate written description to support the scope of the claims asserted by VoIP-Pal in furtherance of its infringement theories

1 or any reasonably understood scope of the claims.⁸ 35 U.S.C. § 112 ¶ 1⁹ requires the specification
 2 to contain “a written description of the invention.” To fulfill the written description requirement,
 3 the specification “must clearly allow persons of ordinary skill in the art to recognize that the
 4 inventor invented what is claimed.” *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351
 5 (Fed. Cir. 2010) (citation omitted). To satisfy the written description requirement, “the applicant
 6 must ‘convey with reasonable clarity to those skilled in the art that, as of the filing date sought,
 7 he or she was in possession of the invention,’ and demonstrate that by disclosure in the specifi-
 8 cation of the patent.” *Carnegie Mellon Univ. v. Hoffmann-La Roche Inc.*, 541 F.3d 1115, 1122
 9 (Fed. Cir. 2008) (quoting *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1563-64 (Fed. Cir. 1991)).
 10 The Asserted Patents do not meet that requirement.¹⁰

11 Additionally, the Asserted Patents do not enable the claim scope contended in VoIP-Pal’s
 12 Infringement Contentions.¹¹ Title 35 U.S.C. § 112 ¶ 1 requires the specification to describe “the
 13 manner and process of making and using [the invention], in such full, clear, concise, and exact
 14 terms as to enable any person skilled in the art to which it pertains ... to make and use the [in-
 15 vention].” The enablement requirement is separate from and in addition to the written description
 16 requirement. *Ariad*, 598 F.3d at 1344. This “requirement is satisfied when one skilled in the art,
 17 after reading the specification, could practice the claimed invention without undue experimenta-
 18 tion.” *AK Steel Corp. v. Sollac & Ugine*, 344 F.3d 1234, 1244 (Fed. Cir. 2003) (citation omitted);
 19
 20

21 ⁸ This is also true of the original application(s) that gave rise to the Asserted Patents. For ease
 22 of reference, Defendants refer only to the issued specification.

23 ⁹ Because the original applications that gave rise to the Asserted Patents was filed prior to Sep-
 24 tember 16, 2012, Defendants apply pre-AIA 35 U.S.C. § 112 ¶ 1 here. However, to the extent
 25 that any other form of the patent statute (e.g., post-AIA) regarding invalidity for indefiniteness,
 non-enablement, or lack of written description applies, Defendants’ contentions and analysis ap-
 ply just the same.

26 ¹⁰ Nor does any provisional application to which the Asserted Patents claim priority meet either
 of the enablement or written description requirements.

27 ¹¹ This is also true of the original application(s) that gave rise to the Asserted Patents. For ease
 28 of reference, Defendants refer only to the issued specification.

1 *see Wyeth & Cordis Corp. v. Abbott Laboratories*, 720 F.3d 1380 (Fed. Cir. 2013). The Asserted
 2 Patents do not meet that requirement.

3 The Asserted Claims fail to satisfy the written description and enablement requirements
 4 due to at least the following claim language or limitations:

5 **a. '762 Patent**

- 6 • “call controller,” “controller”;
 - 7 ○ Appears in '762 claims 6 and 26
 - 8 ○ Renders asserted '762 claims 6, 36, and 30 invalid.
 - 9 ○ The '762 Patent does not demonstrate possession of, or enable skilled artisans to
 - 10 practice the “call controller” or “controller” limitations. Neither the claims nor
 - 11 the specification define a call controller or controller.
- 12 • “first network”;
 - 13 ○ Appears in '762 claims 1, 21, and 25.
 - 14 ○ Renders asserted '762 claims 6, 16, 21, 26, and 30 invalid.
 - 15 ○ The '762 Patent does not demonstrate possession of, or enable skilled artisans to
 - 16 practice the “first network” limitations. Neither the claims nor the specification
 - 17 define a first network, nor provide what qualities a network must have in order to
 - 18 be a “first” network.
- 19 • “second network”;
 - 20 ○ Appears in '762 claims 1, 21, and 25.
 - 21 ○ Renders asserted '762 claims 6, 16, 21, 26, and 30 invalid.
 - 22 ○ The '762 Patent does not demonstrate possession of, or enable skilled artisans to
 - 23 practice the “second network” limitations. Neither the claims nor the specifica-
 - 24 tion define a second network, nor provide what qualities a network must have in
 - 25 order to be a “second” network.
- 26 • “third network”;
 - 27 ○ Appears in '762 claims 2, 6, 21, and 26.

- Renders asserted '762 claims 6, 21, and 26 invalid.
- The '762 Patent does not demonstrate possession of, or enable skilled artisans to practice the “third network” limitations. Neither the claims nor the specification define a third network, nor provide what qualities a network must have in order to be a “third” network.
- “first network classification criterion”;
 - Appears in '762 claims 1, 21, and 25.
 - Renders asserted '762 claims 6, 16, 21, 26, and 30 invalid.
 - The '762 Patent does not demonstrate possession of, or enable skilled artisans to practice the “first network classification criterion” limitations. Neither the claims nor the specification explain or define what the criterion or criteria are e.g., what criteria correlate with the first network.
- “second network classification criterion”;
 - Appears in '762 claims 1, 21, and 25.
 - Renders asserted '762 claims 6, 16, 21, 26, and 30 invalid.
 - The '762 Patent does not demonstrate possession of, or enable skilled artisans to practice the “second network classification criterion” limitations. Neither the claims nor the specification explain or define what the criterion or criteria are e.g., what criteria correlate with the second network.
- “third network classification criterion”;
 - Appears in '762 claims 2, 6, 21, and 26.
 - Renders asserted '762 claims 6, 21, and 26 invalid.
 - The '762 Patent does not demonstrate possession of, or enable skilled artisans to practice the “third network classification criterion” limitations. Neither the claims nor the specification explain or define what the criterion or criteria are e.g., what criteria correlate with the third network.
- “profile”;

- Appears in '762 claims 1, 21, and 25.
- Renders asserted '762 claims 6, 16, 21, 26, and 30 invalid.
- The '762 Patent does not demonstrate possession of, or enable skilled artisans to practice the “profile” limitations as broadly as VoIP-Pal appears to contend in its infringement contentions that the limitation should be construed, such as encompassing a caller’s contacts list.
- “attributes”;
 - Appears in '762 claims 1, 2, 21, 25, 26, and 30.
 - Renders asserted '762 claims 6, 16, 21, 26, and 30 invalid.
 - The '762 Patent does not demonstrate possession of, or enable skilled artisans to practice the “attributes” limitations as broadly as VoIP-Pal appears to contend in its infringement contentions that the limitation should be construed, such as encompassing entries in a caller’s contacts list.
- “classify[/classifying] the communication . . . as a first network communication if a first network classification criterion is met and as a second network communication if a second network classification criterion is met”;
 - Appears in '762 claims 1, 25.
 - Renders asserted '762 claims 6, 16, 26, and 30 invalid.
 - The '762 Patent does not demonstrate possession of, or enable skilled artisans to practice the “classifying . . .” limitations as broadly as VoIP-Pal appears to contend in its infringement contentions that the limitation should be construed. The patent discloses classifying the communication as for a “private network” or a “public network,” and not classifying simply between any two networks.

b. '330 Patent

- “controller”;
 - Appears in '330 claims 1 and 12.
 - Renders asserted '330 claims 3, 4, 12, and 14 invalid.

- 1 ○ The '330 Patent does not demonstrate possession of, or enable skilled artisans to
2 practice the “controller” limitations. Neither the claims nor the specification de-
3 fine a controller.
- 4 • “system communication”;
- 5 ○ Appears in '330 claims 1, 12, and 13.
- 6 ○ Renders asserted '330 claims 3, 4, 12, and 14 invalid.
- 7 ○ The '330 Patent does not demonstrate possession of, or enable skilled artisans to
8 practice the “system communication” limitations. Neither the claims nor the spec-
9 ification define a system communication, nor provide what qualities a communi-
10 cation must have in order to be a “system” communication.
- 11 • “external network communication”;
- 12 ○ Appears in '330 claims 1, 12, and 13.
- 13 ○ Renders asserted '330 claims 3, 4, 12, and 14 invalid.
- 14 ○ The '330 Patent does not demonstrate possession of, or enable skilled artisans to
15 practice the “external network communication” limitations. Neither the claims
16 nor the specification define an external network communication, nor provide what
17 qualities a communication must have in order to be an “external network” com-
18 munication.
- 19 • “classifying the communication, based on the comparing”
- 20 ○ Appears in '330 claim 1.
- 21 ○ Renders asserted '330 claims 3 and 4 invalid.
- 22 ○ The '330 Patent does not demonstrate possession of, or enable skilled artisans to
23 practice “classifying the communication, based on the comparing.” Neither the
24 claims nor the specification provide information on how to classify the commu-
25 nication based on the comparing. The patent does not detail whether the classi-
26 fication is based upon the act of comparing itself, or upon results of the compari-
27 son – which are similarly not disclosed or explained.
- 28

- 1 • “classify[/classifying] the communication . . . as a system communication or an external
2 network communication”;
 - 3 ○ Appears in ’330 claims 1 and 12.
 - 4 ○ Renders asserted ’330 claims 3, 4, 12, and 14 invalid.
 - 5 ○ The ’330 Patent does not demonstrate possession of, or enable skilled artisans to
6 practice the “classifying . . .” limitations as broadly as VoIP-Pal appears to con-
7 tend in its infringement contentions that the limitation should be construed. The
8 patent discloses classifying the communication as for a “private network” or a
9 “public network,” and not classifying simply between a “system communication”
10 and a “external network communication.”
- 11 • “causing the at least one processor to access the at least one database to search for the
12 user profile for the second participant is based on the comparing at least a portion of the
13 second participant identifier with the at least one of the plurality of first participant at-
14 tributes”;
 - 15 ○ Appears in ’330 claim 4.
 - 16 ○ Renders asserted ’330 claim 4 invalid.
 - 17 ○ The ’330 Patent does not demonstrate possession of, or enable skilled artisans to
18 practice “causing the at least one processor to access the at least one database to
19 search for the user profile for the second participant is based on the comparing at
20 least a portion of the second participant identifier with the at least one of the plu-
21 rality of first participant attributes.” Neither the claims nor the specification pro-
22 vide information on how to cause the at least one processor to access the at least
23 one database to search for the user profile for the second participant based on the
24 comparing at least a portion of the second participant identifier with the at least
25 one of the plurality of first participant attributes. The patent does not detail
26 whether causing the at least one processor to access the at least one database to
27
28

1 search for the user profile for the second participant is based upon the act of com-
2 paring itself, or upon results of the comparison – which are similarly not disclosed
3 or explained.

- 4 • “classifying the communication is based on the causing the at least one processor to ac-
5 cess the at least one database to search for the user profile for the second participant”;
 - 6 ○ Appears in ’330 claim 4.
 - 7 ○ Renders asserted ’330 claim 4 invalid.
 - 8 ○ The ’330 Patent does not demonstrate possession of, or enable skilled artisans to
9 practice “classifying the communication is based on the causing the at least one
10 processor to access the at least one database to search for the user profile for the
11 second participant.” Neither the claims nor the specification provide information
12 on how to classify the communication based on causing the at least one processor
13 to access the at least one database to search for the user profile for the second
14 participant. The patent does not detail whether the classification is based upon
15 the act of causing the at least one processor to access the at least one database to
16 search for the user profile for the second participant, or upon results of the access
17 and search – which are similarly not disclosed or explained.
- 18 • “communication blocking information”;
 - 19 ○ Appears in ’330 claim 14.
 - 20 ○ Renders asserted ’330 claim 14 invalid.
 - 21 ○ The ’330 Patent does not demonstrate possession of, or enable skilled artisans to
22 practice the “communication blocking information” limitations. The patent does
23 not provide any definition for or qualities of what constitutes communication
24 blocking information.
- 25 • “profile”;
 - 26 ○ Appears in ’330 claims 1, 4, and 12.
 - 27 ○ Renders asserted ’330 claims 4, 12, and 14 invalid.

- The '330 Patent does not demonstrate possession of, or enable skilled artisans to practice the “profile” limitations as broadly as VoIP-Pal appears to contend in its infringement contentions that the limitation should be construed, such as encompassing a caller’s contacts list.

- “attributes”;

- Appears in '330 claims 1, 4, and 12.
- Renders asserted '330 claims 4, 12, and 14 invalid.
- The '330 Patent does not demonstrate possession of, or enable skilled artisans to practice the “attributes” limitations as broadly as VoIP-Pal appears to contend in its infringement contentions that the limitation should be construed, such as encompassing entries in a caller’s contacts list.

c. '002 Patent

- “controller”;

- Appears in '002 claims 1 and 12.
- Renders asserted '002 claims 1, 12, 22, 26, and 29 invalid.
- The '002 Patent does not demonstrate possession of, or enable skilled artisans to practice the “controller” limitations. Neither the claims nor the specification define a controller.

- “system communication”;

- Appears in '002 claims 1 and 12.
- Renders asserted '002 claims 1, 12, 22, 26, and 29 invalid.
- The '002 Patent does not demonstrate possession of, or enable skilled artisans to practice the “system communication” limitations. Neither the claims nor the specification define a system communication, nor provide what qualities a communication must have in order to be a “system” communication.

- “external network communication”;

- Appears in '002 claims 1 and 12.

- Renders asserted '002 claims 1, 12, 22, 26, and 29 invalid.
- The '002 Patent does not demonstrate possession of, or enable skilled artisans to practice the “external network communication” limitations. Neither the claims nor the specification define an external network communication, nor provide what qualities a communication must have in order to be an “external network” communication.
- “communication blocking information”;
 - Appears in '002 claim 26.
 - Renders asserted '002 claim 26 invalid.
 - The '002 Patent does not demonstrate possession of, or enable skilled artisans to practice the “communication blocking information” limitations. The patent does not provide any definition for or qualities of what constitutes communication blocking information.
- “classifying the communication . . . as a system communication or an external network communication, using the at least one processor;”
 - Appears in '002 claim 1.
 - Renders asserted '002 claims 1, 22, and 26 invalid.
 - The '002 Patent does not demonstrate possession of, or enable skilled artisans to practice the “classifying . . .” limitations as broadly as VoIP-Pal appears to contend in its infringement contentions that the limitation should be construed. The patent discloses (albeit, without substantial detail) classifying the communication as for a “private network” or a “public network,” and not classifying simply between a “system communication” and a “external network communication.”
- “profile”;
 - Appears in '002 claims 1, 12, and 22.
 - Renders asserted '002 claims 1, 12, 22, 26, and 29 invalid.

- The '002 Patent does not demonstrate possession of, or enable skilled artisans to practice the “profile” limitations as broadly as VoIP-Pal appears to contend in its infringement contentions that the limitation should be construed, such as encompassing a caller’s contacts list.

- “attributes”;

- Appears in '002 claims 1 and 12.
- Renders asserted '002 claims 1, 12, 22, 26, and 29 invalid.
- The '002 Patent does not demonstrate possession of, or enable skilled artisans to practice the “attributes” limitations as broadly as VoIP-Pal appears to contend in its infringement contentions that the limitation should be construed, such as encompassing entries in a caller’s contacts list.

d. '549 Patent

- “system communication”;

- Appears in '549 claims 1, 9, and 17.
- Renders asserted '549 claims 2, 6, 9, 12, 17, and 24 invalid.
- The '549 Patent does not demonstrate possession of, or enable skilled artisans to practice the “system communication” limitations. Neither the claims nor the specification define a system communication, nor provide what qualities a communication must have in order to be a “system” communication.

- “external network communication”;

- Appears in '549 claims 1, 6, 8, 17, and 24.
- Renders asserted '549 claims 2, 6, 9, 12, 17, and 24 invalid.
- The '549 Patent does not demonstrate possession of, or enable skilled artisans to practice the “external network communication” limitations. Neither the claims nor the specification define an external network communication, nor provide what qualities a communication must have in order to be an “external network” communication.

- 1 • “communication blocking information”;
 - 2 ○ Appears in ’549 claim 12.
 - 3 ○ Renders asserted ’549 claim 12 invalid.
 - 4 ○ The ’549 Patent does not demonstrate possession of, or enable skilled artisans to
 - 5 practice the “communication blocking information” limitations. The patent does
 - 6 not provide any definition for or qualities of what constitutes communication
 - 7 blocking information.
- 8 • “determine whether the second participant device is operably configured to communi-
9 cate via the communication system”; and
 - 10 ○ Appears in ’549 claim 6.
 - 11 ○ Renders asserted ’549 claim 6 invalid.
 - 12 ○ The ’549 Patent does not demonstrate possession of, or enable skilled artisans to
 - 13 “determine whether the second participant device is operably configured to com-
14 municate via the communication system.” The patent does not provide any infor-
15 mation on how to determine whether the second participant device is operably
16 configured to communicate via the communication system.
- 17 • “using the at least one processor, to determine whether a further communication that
18 was initiated by the first participant to a third participant device is allowed to proceed.”
 - 19 ○ Appears in ’549 claim 11.
 - 20 ○ Renders asserted ’549 claim 11 invalid.
 - 21 ○ The ’549 Patent does not demonstrate possession of, or enable skilled artisans to
 - 22 practice “using the at least one processor, to determine whether a further commu-
23 nication that was initiated by the first participant to a third participant device is
24 allowed to proceed.” The patent does not provide any information on how to de-
25 termine if communication that was initiated by the first participant to a third par-
26 ticipant device is allowed to proceed, or what qualities such a communication
27 would have.

- 1 • “classifying the communication as a system communication or an external network com-
2 munication;”
 - 3 ○ Appears in ’549 claim 1.
 - 4 ○ Renders asserted ’549 claims 2, 6, 9, and 12 invalid.
 - 5 ○ The ’549 Patent does not demonstrate possession of, or enable skilled artisans to
6 practice the “classifying . . .” limitations as broadly as VoIP-Pal appears to con-
7 tend in its infringement contentions that the limitation should be construed. The
8 patent discloses classifying the communication as for a “private network” or a
9 “public network,” and not classifying simply between a “system communication”
10 and a “external network communication.”
- 11 • “profile”;
 - 12 ○ Appears in ’549 claims 1, 8, 9, 17, and 24.
 - 13 ○ Renders asserted ’549 claims 2, 6, 9, 12, 17, and 24 invalid.
 - 14 ○ The ’549 Patent does not demonstrate possession of, or enable skilled artisans to
15 practice the “profile” limitations as broadly as VoIP-Pal appears to contend in its
16 infringement contentions that the limitation should be construed, such as encom-
17 passing a caller’s contacts list.
- 18 • “attribute[(s)]”;
 - 19 ○ Appears in ’549 claims 1, 11, 12, and 17.
 - 20 ○ Renders asserted ’549 claims 2, 6, 9, 12, 17, and 24 invalid.
 - 21 ○ The ’549 Patent does not demonstrate possession of, or enable skilled artisans to
22 practice the “attributes” limitations as broadly as VoIP-Pal appears to contend in
23 its infringement contentions that the limitation should be construed, such as en-
24 compassing entries in a caller’s contacts list.

25 **5. Invalidity Of The Asserted Patents Based On 35 U.S.C. § 112 For Indefi-**
26 **niteness.**

The Asserted Claims of the Asserted Patents are invalid for failing to comply with the definiteness requirement of 35 U.S.C. § 112. Defendants note that Defendants’ charting of a prior art reference for a claim or limitation that Defendants contend is invalid for lack of definiteness in no way represents an admission or concession that the scope of the claim or limitation is definite or ascertainable.

Title 35 U.S.C. § 112 ¶ 2 requires that a patent claim “particularly point[] out and distinctly claim[] the subject matter which the applicant regards as his invention.” Claim terms that fail to inform those skilled in the art “with reasonable certainty . . . about the scope of the invention” fail the definiteness requirement of § 112 ¶ 2. *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2124 (2014).

All Asserted Claims are invalid as indefinite because, at a minimum, the limitations identified in this section, read in light of the intrinsic evidence, fail to inform those skilled in the art with reasonable certainty about the scope of the claimed inventions:

a. ’762 Patent

- “call controller,” “controller”;
 - Appears in ’762 claims 6 and 26
 - Renders asserted ’762 claims 6, 36, and 30 invalid.
 - The ’762 Patent fails to inform those skilled in the art with reasonable certainty about the scope of the term “call controller” or “controller.” Neither the claims nor the specification define a call controller or controller.
- “first network”;
 - Appears in ’762 claims 1, 21, and 25.
 - Renders asserted ’762 claims 6, 16, 21, 26, and 30 invalid.
 - The ’762 Patent fails to inform those skilled in the art with reasonable certainty about the scope of the term “first network.” Neither the claims nor the specification define a first network, nor provide what qualities a network must have in order to be a “first” network.

- 1 • “second network”;
 - 2 ○ Appears in ’762 claims 1, 21, and 25.
 - 3 ○ Renders asserted ’762 claims 6, 16, 21, 26, and 30 invalid.
 - 4 ○ The ’762 Patent fails to inform those skilled in the art with reasonable certainty
 - 5 about the scope of the term “second network.” Neither the claims nor the speci-
 - 6 fication define a second network, nor provide what qualities a network must have
 - 7 in order to be a “second” network.
- 8 • “third network”;
 - 9 ○ Appears in ’762 claims 2, 6, 21, and 26.
 - 10 ○ Renders asserted ’762 claims 6, 21, and 26 invalid.
 - 11 ○ The ’762 Patent does not demonstrate possession of, or enable skilled artisans to
 - 12 practice the “third network” limitations. Neither the claims nor the specification
 - 13 define a third network, nor provide what qualities a network must have in order
 - 14 to be a “third” network.
- 15 • “first network classification criterion”;
 - 16 ○ Appears in ’762 claims 1, 21, and 25.
 - 17 ○ Renders asserted ’762 claims 6, 16, 21, 26, and 30 invalid.
 - 18 ○ The ’762 Patent fails to inform those skilled in the art with reasonable certainty
 - 19 about the scope of the term “first network classification criterion.” Neither the
 - 20 claims nor the specification explain what the criterion or criteria are e.g., what
 - 21 criteria correlate with the first network.
- 22 • “second network classification criterion”;
 - 23 ○ Appears in ’762 claims 1, 21, and 25.
 - 24 ○ Renders asserted ’762 claims 6, 16, 21, 26, and 30 invalid.
 - 25 ○ The ’762 Patent fails to inform those skilled in the art with reasonable certainty
 - 26 about the scope of the term “second network classification criterion.” Neither the
 - 27
 - 28

claims nor the specification explain what the criterion or criteria are e.g., what criteria correlate with the second network.

- “third network classification criterion”;
 - Appears in ’762 claims 2, 6, 21, and 26.
 - Renders asserted ’762 claims 6, 21, and 26 invalid.
 - The ’762 Patent fails to inform those skilled in the art with reasonable certainty about the scope of the term “third network classification criterion.” Neither the claims nor the specification explain what the criterion or criteria are e.g., what criteria correlate with the third network.

b. ’330 Patent

- “controller”;
 - Appears in ’330 claims 1 and 12.
 - Renders asserted ’330 claims 3, 4, 12, and 14 invalid.
 - The ’762 Patent fails to inform those skilled in the art with reasonable certainty about the scope of the term “controller.” Neither the claims nor the specification define a controller.
- “system communication”;
 - Appears in ’330 claims 1, 12, and 13.
 - Renders asserted ’330 claims 3, 4, 12, and 14 invalid.
 - The ’330 Patent fails to inform those skilled in the art with reasonable certainty about the scope of the term “system communication.” Neither the claims nor the specification define a system communication, nor provide what qualities a communication must have in order to be a “system” communication.
- “external network communication”;
 - Appears in ’330 claims 1, 12, and 13.
 - Renders asserted ’330 claims 3, 4, 12, and 14 invalid.

- 1 ○ The '330 Patent fails to inform those skilled in the art with reasonable certainty
2 about the scope of the term “external network communication.” Neither the
3 claims nor the specification define an external network communication, nor pro-
4 vide what qualities a communication must have in order to be an “external net-
5 work” communication.
- 6 • “classifying the communication, based on the comparing”
- 7 ○ Appears in '330 claim 1.
- 8 ○ Renders asserted '330 claims 3 and 4 invalid.
- 9 ○ The '330 Patent fails to inform those skilled in the art with reasonable certainty
10 about the scope of the term “classifying the communication, based on the com-
11 paring.” Neither the claims nor the specification provide information on how to
12 classify the communication based on the comparing. The patent does not detail
13 whether the classification is based upon the act of comparing itself, or upon results
14 of the comparison – which are similarly not disclosed or explained.
- 15 • “causing the at least one processor to access the at least one database to search for the
16 user profile for the second participant is based on the comparing at least a portion of the
17 second participant identifier with the at least one of the plurality of first participant at-
18 tributes”;
- 19 ○ Appears in '330 claim 4.
- 20 ○ Renders asserted '330 claim 4 invalid.
- 21 ○ The '330 Patent fails to inform those skilled in the art with reasonable certainty
22 about the scope of the limitation “causing the at least one processor to access the
23 at least one database to search for the user profile for the second participant is
24 based on the comparing at least a portion of the second participant identifier with
25 the at least one of the plurality of first participant attributes.” Neither the claims
26 nor the specification provide information on how to cause the at least one proces-
27 sor to access the at least one database to search for the user profile for the second
28

participant based on the comparing at least a portion of the second participant identifier with the at least one of the plurality of first participant attributes. The patent does not detail whether causing the at least one processor to access the at least one database to search for the user profile for the second participant is based upon the act of comparing itself, or upon results of the comparison – which are similarly not disclosed or explained.

- “classifying the communication is based on the causing the at least one processor to access the at least one database to search for the user profile for the second participant”;
 - Appears in ’330 claim 4.
 - Renders asserted ’330 claim 4 invalid.
 - The ’330 Patent fails to inform those skilled in the art with reasonable certainty about the scope of the limitation “classifying the communication is based on the causing the at least one processor to access the at least one database to search for the user profile for the second participant.” Neither the claims nor the specification provide information on how to classify the communication based on causing the at least one processor to access the at least one database to search for the user profile for the second participant. The patent does not detail whether the classification is based upon the act of causing the at least one processor to access the at least one database to search for the user profile for the second participant, or upon results of the access and search – which are similarly not disclosed or explained.
- “communication blocking information”;
 - Appears in ’330 claim 14.
 - Renders asserted ’330 claim 14 invalid.
 - The ’330 Patent fails to inform those skilled in the art with reasonable certainty about the scope of the term “communication blocking information.” The patent does not provide any definition for or qualities of what constitutes communication blocking information.

c. '002 Patent

- “controller”;
 - Appears in '002 claims 1 and 12.
 - Renders asserted '002 claims 1, 12, 22, 26, and 29 invalid.
 - The '002 Patent fails to inform those skilled in the art with reasonable certainty about the scope of the term “controller.” Neither the claims nor the specification define a controller.
- “system communication”;
 - Appears in '002 claims 1 and 12.
 - Renders asserted '002 claims 1, 12, 22, 26, and 29 invalid.
 - The '002 Patent fails to inform those skilled in the art with reasonable certainty about the scope of the term “system communication.” Neither the claims nor the specification define a system communication, nor provide what qualities a communication must have in order to be a “system” communication.
- “external network communication”;
 - Appears in '002 claims 1 and 12.
 - Renders asserted '002 claims 1, 12, 22, 26, and 29 invalid.
 - The '002 Patent fails to inform those skilled in the art with reasonable certainty about the scope of the term “external network communication.” Neither the claims nor the specification define an external network communication, nor provide what qualities a communication must have in order to be an “external network” communication.
- “communication blocking information”;
 - Appears in '002 claim 26.
 - Renders asserted '002 claim 26 invalid.
 - The '002 Patent fails to inform those skilled in the art with reasonable certainty about the scope of the term “communication blocking information.” The patent

does not provide any definition for or qualities of what constitutes communication blocking information.

d. '549 Patent

- “system communication”;
 - Appears in '549 claims 1, 9, and 17.
 - Renders asserted '549 claims 2, 6, 9, 12, 17, and 24 invalid.
 - The '549 Patent fails to inform those skilled in the art with reasonable certainty about the scope of the term “system communication.” Neither the claims nor the specification define a system communication, nor provide what qualities a communication must have in order to be a “system” communication.
- “external network communication”;
 - Appears in '549 claims 1, 6, 8, 17, and 24.
 - Renders asserted '549 claims 2, 6, 9, 12, 17, and 24 invalid.
 - The '549 Patent fails to inform those skilled in the art with reasonable certainty about the scope of the term “external network communication.” Neither the claims nor the specification define an external network communication, nor provide what qualities a communication must have in order to be an “external network” communication.
- “communication blocking information”;
 - Appears in '549 claim 12.
 - Renders asserted '549 claim 12 invalid.
 - The '549 Patent fails to inform those skilled in the art with reasonable certainty about the scope of the term “communication blocking information.” The patent does not provide any definition for or qualities of what constitutes communication blocking information.
- “determine whether the second participant device is operably configured to communicate via the communication system”; and

- Appears in '549 claim 6.
- Renders asserted '549 claim 6 invalid.
- The '549 Patent fails to inform those skilled in the art with reasonable certainty about the scope of the limitation “determine whether the second participant device is operably configured to communicate via the communication system.” The patent does not provide any information on how to determine whether the second participant device is operably configured to communicate via the communication system.
- “using the at least one processor, to determine whether a further communication that was initiated by the first participant to a third participant device is allowed to proceed.”
 - Appears in '549 claim 11.
 - Renders asserted '549 claim 11 invalid.
 - The '549 Patent fails to inform those skilled in the art with reasonable certainty about the scope of the limitation “using the at least one processor, to determine whether a further communication that was initiated by the first participant to a third participant device is allowed to proceed.” The patent does not provide any information on how to determine if communication that was initiated by the first participant to a third participant device is allowed to proceed, or what qualities such a communication would have.

Defendants reserve the right to amend this list.

6. The Asserted Patents Are Directed to Patent-Ineligible Subject Matter

All of the Asserted Claims of the Asserted Patents are invalid under 35 U.S.C. § 101 for claiming ineligible subject matter. The basis for the invalidity of the claims under § 101 is set forth in Defendants’ motion to dismiss. *See VoIP-Pal.com, Inc. v. Amazon, Inc.*, No. 18-cv-07020-LHK, Dkt. No. 42; *VoIP-Pal.com, Inc. v. Apple Inc.*, No. 18-cv-06216, Dkt. No. 57.

7. Document Production

Pursuant to the Court's Scheduling Order and concurrent with service of these Initial Invalidity Contentions, Defendants are also producing documents related to their Initial Invalidity Contentions. The copies of the documents will be sent under separate cover.

1 Dated: March 18, 2019

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